

To: Dresser, Chris[Dresser.Chris@epa.gov]
From: Morales, Monica
Sent: Tue 2/7/2017 3:20:34 PM
Subject: RE: 2014_Utah_O&G_EI Follow up Questions

Thanks.

Monica S. Morales

Air Program (8P-AR)

U.S. EPA Region 8

1595 Wynkoop Street

Denver, Colorado 80202-1129

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morales.monica@epa.gov

From: Dresser, Chris
Sent: Tuesday, February 07, 2017 8:08 AM
To: Morales, Monica <Morales.Monica@epa.gov>
Subject: FW: 2014_Utah_O&G_EI Follow up Questions

Another example letter...

Chris Dresser

U.S. EPA – Region 8

1595 Wynkoop Street

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Phone: (303) 312-6385

From: Zull, Aaron
Sent: Tuesday, February 07, 2017 7:43 AM
To: 'Natalie.Ohlhausen@anadarko.com' <Natalie.Ohlhausen@anadarko.com>
Cc: Whitney Oswald <woswald@utah.gov>; Chris Dresser (Dresser.Chris@epa.gov) <Dresser.Chris@epa.gov>
Subject: 2014_Utah_O&G_EI Follow up Questions

Dear Natalie Ohlhausen,

Thank you again for submitting 2014 emissions information from your oil and gas operations in the Uinta Basin. As part of our ongoing quality assurance process, we have reviewed the information provided to ensure the inventory is as accurate as possible; and to generally improve our understanding of oil and gas operations in the Uinta Basin. The EPA has coordinated with Utah DAQ and the Ute Tribe to review your inventory submittal. As part of that analysis, we have the following observations and questions for you concerning your inventory submittal. These observations and questions are organized by categories corresponding to each worksheet within the workbook you submitted.

We would appreciate any insight you have into the issues identified - and we would be happy to set up a call, or in-person meeting to discuss. Similar emails have been sent to other operators who submitted information for this effort.

Where appropriate please update the information contained in the attached spreadsheet. Please do not alter any of the information beyond the issues identified – or if you do, please document the changes in your email response. **We ask that you provide comments and an updated version of the workbook by February 28th.** Please let me know if you have any questions or concerns.

Questions:

Color-coding:

Black text = Significant emissions impact. If operators do not address, EPA will edit as appropriate.

Green = Not a significant emissions impact. However, EPA would appreciate responses or follow-up discussion which will help us better understand the issue.

General

ProdAreaDesignation&Analyses

1. Confirm calculation of “VOC wt%” numbers for Produced Natural Gas Composition for Production Area Designation 1, 2, 3 and 5.
2. Confirm calculation of “Gas MW (lb/lb-mole)” numbers for Produced Natural Gas Composition for Production Area Designation 1 and 2.

RICE&Turbines

1. We observed quite a bit of variance in the operating hours used for engines/turbines – describe how you determined operating hours for these equipment.

Separators&Heaters

Dehydrators

1. Confirm that “low-emission dehydrators” are the only glycol dehydration configuration in

use by APC.

2. Confirm that the glycol dehydrator at Natural Buttes Compressor Station (X12196) operated only 600 hours in the year.

Tanks

1. Confirm/explain that the following 38 facilities have reported zero tank VOCs at facilities WITH tanks AND throughput > 0:

1	35024839 - 30009
2	34000244 - 71662
3	35024852 - 71771
4	35024860 - 71779
5	35024861 - 71780
6	35024867 - 71818
7	35024872 - 71841
8	35012964 - 71911
9	35024912 - 71951
10	35024913 - 71954
11	35013024 - 72000
12	35013029 - 72006
13	35013076 - 72067
14	35013125 - 72125
15	34000228 - 72260
16	35014881 - 72270
17	34000103 - 72323

18	35013289 - 72717
19	35013293 - 72721
20	35013318 - 72746
21	35013326 - 72754
22	35013339 - 72767
23	35013348 - 72776
24	35013359 - 72787
25	35013381 - 72809
26	35013384 - 72812
27	35013430 - 72861
28	35013443 - 72876
29	34000545 - 72908
30	35013485 - 73039
31	34000595 - 73655
32	35013618 - 93566
33	35013632 - 93629
34	35005417 - 93631
35	35024970 - C3630
36	Natural Buttes Compressor Station - X12196
37	Ouray Compressor Station - X11222
38	Chipeta Gas Plant - X11488

2. Confirm/explain that the following 36 facilities have no tanks:

1	West - X20250
2	35036860
3	35036992
4	35037019
5	35037060
6	35037089
7	35037345
8	35037426
9	36191939
10	36194538
11	F0686
12	F0684
13	F0709
14	E0532
15	E0574
16	E0562
17	E0560
18	E0573
19	E0575
20	E0552
21	E0557
22	E0576
23	F0687

24	E0565
25	E0553
26	E0561
27	E0577
28	E0572
29	E0567
30	E0534
31	E0551
32	E0566
33	E0533
34	E0555
35	E0556
36	E0554

3. Confirm/explain that for Facilities APC1801 – APC1843 (which appear to be midstream/centralized treatment facilities), there are zero flash emissions. Is there no pressure differential between the pressurized vessel(s) immediately upstream of the atmospheric storage tank (e.g. from plant inlet separator, compressor skid inlet scrubber and interstage scrubbers, stabilizer vessels, dehy liquid knockout, coalescer filters, drip pots, etc.) [APC shows “separator” pressures from 60 psig – 127.8 psig]

4. From APC’s Tribal Minor Source Registration data, the overall pre-control VOC lb/barrel for was 4.55, but in the UBEI the pre-control VOC lb/bbl for wellpads is 2.71, a 40% decrease – explain the difference in VOC lb/bbl emissions from tanks.

5. Explain 0.82 lb/bbl TANKS 4.0 SWB EF for facilities APC1801 – APC1825 versus 0.21 lb/bbl TANKS 4.0 SWB EF for facilities APC1826 - APC1843.

6. If you indicated controls on oil/condensate tank, are your water tanks controlled as well?

Pneumatic Controllers

1. Confirm that the following 78 facilities have no pneumatic controllers reported – explain (compressed air, electric-driven?):

- | | |
|----|---|
| 1 | Antelope Flats Compressor Station - X10576 |
| 2 | Archie Bench - X12040 |
| 3 | Bitter Creek - X11295 |
| 4 | Blue Feather - X10099 |
| 5 | Bonanza East - X12178 |
| 6 | Bonanza West - X11894 |
| 7 | Bridge Compressor Station - X11047 |
| 8 | Cottonwood Wash Compressor Station - X20250 |
| 9 | Diablo - X11391 |
| 10 | East Bench - X11026 |
| 11 | East Junior - X10605 |
| 12 | L-16 - X10379 |
| 13 | Morgan State - X12106 |
| 14 | Natural Buttes Compressor Station - X12196 |
| 15 | North - X10470 |
| 16 | North East - X11080 |

17	Ouray Compressor Station - X11222
18	Sage Grouse - X11642
19	Sand Wash Compressor Station - X12039
20	South - X11726
21	South East - X11736
22	West - X20250
23	White River Compressor Station - X12531
24	Willow Creek - X10327
25	Chipeta Gas Plant - X11488
26	Blue Feather Battery - X11599
27	Bonanza Evaporation Pond - X11553
28	CIGE 114 - X11098
29	Goat Pasture Evaporation Pond - X11421
30	NBU 159 - 72091
31	NBU 347 SWD - X10903
32	NBU 921-33F - X11147
33	NBU 921-34H - C0907
34	NBU 921-34K - 77258
35	NBU 921-34L - X12409
36	NBU 921-35J - E1370
37	NBU SWD 159 - X11600
38	Ouray 1 - X12434
39	Pipeline Evaporation Pond - X11424

40	Sage Grouse Tank Battery - X12203
41	SLOP Facility - X11547
42	South Central Battery - X10053
43	White River Battery - X10324
44	35036860
45	35036992
46	35037019
47	35037060
48	35037089
49	35037345
50	35037426
51	36191939
52	36194538
53	F0686
54	F0684
55	F0709
56	E0532
57	E0574
58	E0562
59	E0560
60	E0573
61	E0575
62	E0552

63	E0557
64	E0576
65	F0687
66	E0565
67	E0553
68	E0561
69	E0577
70	E0572
71	E0567
72	E0534
73	E0551
74	E0566
75	E0533
76	E0555
77	E0556
78	E0554

2. We observed you used 2190 operating hours per pneumatic controller for all controllers – describe how you determined operating hours per pneumatic controller and why they do not operate year-round.

3. You reported 6,750 low-bleed pneumatic controllers in 2014 to US EPA Greenhouse Gas Reporting Program Subpart W for the Uinta Basin and reported 7,198 low-bleed pneumatic controllers in the 2014 Emission Inventory – why the difference? What is the correct number?

Pneumatic Pumps

1. Describe how pneumatic pump operating hours determined (e.g. why did 462 pumps operate year-round and 3,637 operate 4,368 hours?)
2. You reported 6,260 pneumatic pumps in 2014 to US EPA Greenhouse Gas Reporting Program Subpart W for the Uinta Basin and reported 4,099 pneumatic pumps in the 2014 Emission Inventory – why the difference? What is the correct number?
3. Did you estimate whole gas emissions from pneumatic pumps the same way for the UBEI and for the 2014 to US EPA Greenhouse Gas Reporting Program Subpart W and then use gas composition to report VOC to UBEI and methane to GHGRP-W?

Aaron Zull

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